



UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL ADJUSTMENT ADMINISTRATION
WASHINGTON, D. C.

GENERAL SPECIFICATIONS FOR AERIAL PHOTOGRAPHY
EAST CENTRAL DIVISION

1. Statement of Work and Areas
to be Photographed.

(a) The contractor shall furnish all materials, superintendence, labor, equipment and transportation, shall execute and finish the aerial photography of the areas listed in the schedule of the advertisement, and shall deliver to the East Central Division, Agricultural Adjustment Administration, such sets of contact prints and index maps, as called for by the invitation and schedule of the advertisement, together with the negatives herein required. All work shall be executed in an expeditious and workmanlike manner, to the satisfaction and acceptance of the Agricultural Adjustment Administration, and in complete accord with these specifications and other conditions of bidding set forth in the invitation and schedule of the advertisement.

(b) Location, dimensions and boundaries of the areas to be photographed are set forth in the schedule of the advertisement and on the map attached thereto. It is expressly understood and agreed that such dimensions are approximate only.

(c) The Agricultural Adjustment Administration will furnish to the contractor, for use as flight maps two copies of maps of the areas to be photographed.

2. Camera to be Used.

(a) The photographs shall be made with a single-lens standard aerial mapping camera, with an effective negative size of not less than sixty (60) square inches, and a focal length of not less than eight (8) inches for an effective negative size of approximately seven (7) inches by nine (9) inches. In the event that the camera has an effective negative size of approximately nine (9) inches by nine (9) inches, the focal length shall be not less than eight (8) inches for the area covered by items 1 and 2 listed in the schedule of the advertisement, and shall be not less than nine (9) inches for the area covered by item 3 listed in the schedule of the advertisement. Said camera shall be so equipped that negatives are held flat in the focal plane at the instant of exposure and the location of the principal point is directly shown or may be determined from collimation marks appearing on each negative. Only filters made from stained optical "A" glass shall be used.

(b) No lens-camera combination shall be used which produces negatives with the definition of any portion, as determined by visual inspection, less than the definition of the corners or better than the definition of the center.

(c) Each bidder shall certify as to the make and model of the camera, or cameras; size of negative; the make, serial number, focal length, and aperture of the lens, or lenses; and the maximum stop opening he proposes to use; and also shall certify that the sample photographs submitted with his bid in accordance with the provisions of paragraph 11(b) hereof were taken with this type of equipment at the stop openings therein specified.

(d) Upon receipt of the award, the successful bidder immediately shall deliver to the Agricultural Adjustment Administration a master glass negative clearly showing the collimation marks of each camera-magazine combination to be used. Collimation marks shall be sharp in outline, so shaped as to facilitate accurate measurements, and shall not be altered. Said master negatives shall in each case be made with their emulsions in the position occupied by the emulsions of the aerial negatives at instant of exposure and shall be neatly marked with the model numbers and the serial numbers of the corresponding camera-magazine combinations and with the number of the contract.

3. Scale of Photographs and Method of Computing Same.

The negatives of the entire area required to be photographed shall be made at the proper height above the ground to yield contact prints at the scale of 1:20,000 (1 inch equals 1,667 feet). The scale of the aerial negatives for each project shall be determined with respect to a datum plane furnished by the Agricultural Adjustment Administration. Contact prints showing a departure from the specified scale of more than plus or minus five (5) percent as determined with respect to the specified datum plane may be rejected by the Agricultural Adjustment Administration.

4. Flight Lines.

(a) All photographic strips shall be flown northerly and southerly within five (5) degrees of the true cardinal direction, except that the Agricultural Adjustment Administration reserves the right to require, in order to obtain more economical coverage, directions of flight lines differing from northerly and southerly directions. Particular care shall be exercised to keep all flight lines as straight and as nearly parallel as possible. The mean bearings of adjacent strips shall be within five (5) degrees of parallel. In no case shall the lack of parallelism between adjacent photographic strips or sections thereof be such as to prevent the sidelap between photographs from conforming with the requirements of paragraph 5 hereof.

(b) Each flight line shall be continuous across the project or across such subdivision of the project as may be agreed upon between the contractor and the Agricultural Adjustment Administration, except in cases where it becomes necessary that the flight be broken. The maximum overlap in line of flight at any such break will not be limited. The contractor shall furnish the Agricultural Adjustment Administration with information as to the occurrence of any such break, indicating for each roll of film from which exposures are used to furnish any of the materials provided for in the schedule of the advertisement, the number of the last negative taken before the break and the number of the first negative taken after the break.

5. Overlap.

Overlap in the line of flight shall average approximately 65 percent and any such overlap of less than 60 percent or more than 70 percent may be considered sufficient ground for the rejection of all negatives made on that particular flight. The sidelap beyond project boundaries shall be not less than 25 percent. The sidelap between adjacent flight strips in the project shall average approximately 30 percent, and any sidelap of less than 20 percent or more than 45 percent may be considered sufficient ground for the rejection of all negatives made on the particular flight in which such sidelap has occurred. However, where flight lines are of necessity non-consecutive, one strip with more than 45 percent overlap will be permitted at each such juncture. Each flight strip shall be so photographed that the principal points of the first two and last two negatives thereof fall outside the boundaries of the project in order to insure three-point intersections at ground control to be located at the edges of the area.

6. Crabbing

Any series of two or more consecutive photographs crabbed in excess of 10° as measured from the line of flight (indicated by the principal points of the consecutive photographs) may be considered unsatisfactory and cause for rejection of that particular flight strip or any portion thereof.

7. Tilt.

Photographs taken with the camera axis in a vertical position are required. Particular care shall be exercised to reduce tilt of the negatives to a minimum. Tilt shall in no case exceed five (5) degrees, and shall not average more than two (2) degrees in any 10-mile section of a flight nor more than one (1) degree for the entire project.

8. Film.

Only fresh, fine-grained, high-speed, panchromatic, special low-shrinkage

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aerial film shall be used, and no film shall be used until there has been a determination by the contracting officer that it meets the requirements herein specified. The shrinkage in any direction on said film after developing and drying shall not exceed three (3) parts per thousand when the film is dried in an oven for 24 hours at a temperature of 120° F., the measurements before and after developing and drying being taken after the film has been stabilized in an atmosphere at the same relative humidity plus or minus three (3) percent for at least two (2) hours. The difference in shrinkage between measurements in any two directions after such developing and drying shall not exceed one (1) part per thousand.

9. Contact Prints.

(a) Contact prints from the aerial negatives shall be made on single-weight, fine-grain surface, semi-matte finish, standard commercial grade photographic paper and no photographic paper shall be used until there has been a determination by the contracting officer that it meets the requirements herein specified. The average difference in shrinkage of said paper measured in any two directions after developing and drying shall not exceed four and one-half (4-1/2) parts per thousand when the prints are dried in an oven for 24 hours at a temperature of 120° F.

(b) Contact prints shall be trimmed with a uniform margin outside the photographic image. On the back of each print shall be stamped, or neatly lettered with waterproof ink, the words "United States Department of Agriculture", "Agricultural Adjustment Administration", the names of the State and County, and the name and address of the contractor, with space provided for insertion of the scale of the photograph.

10. Processing and Drying Film and Prints.

(a) Special care shall be exercised to insure the proper development and the thorough fixation and washing of all film and prints. Special care also shall be exercised to avoid rolling film tightly on drums or in any way distorting it during processing and drying and to insure that all prints will be delivered in an absolutely flat and smooth condition. Prints shall be dried between blotters without the application of weights or by placing face down on cheese-cloth-covered frames. If the contractor desires to use any mechanical process for drying prints, he shall first demonstrate to the satisfaction of the Agricultural Adjustment Administration, with contact prints of suitable grids, that the maximum differential distortion in the resulting prints is not in excess of that which would occur if the prints were dried naturally.

(b) An adequate variety of grades of contrast shall be used in making prints in order to bring out all detail of the negatives. All prints shall be uniform in color and density, and shall be of such a degree of contrast that all details will show clearly, both in the shadows and highlights as well as in the half-tones between shadows and highlights.

(c) All prints shall be clean and free from chemical or other stains, blemishes, uneven spots, airbells, light fog, finger-marks, etc. They shall be thoroughly washed to insure entire freedom from hypo or any other chemicals which would impair their permanency. In general, all photographic quality and definition shall be of the finest obtainable.

11. Quality of Photographs and Samples.

(a) Photographs which are not clear and sharp in detail and of average and uniform density and not free from clouds and cloud shadows, light streaks, snow, static marks and other blemishes which in the opinion of the Agricultural Adjustment Administration would interfere with their intended purpose; which are taken when streams are not within their normal banks or when the sun is less than three hours above the horizon; or which are not equal in quality to the representative samples submitted with the bid in accordance with the following paragraph may be considered unsatisfactory and may be rejected.

(b) Each bidder shall submit two sample contact prints at the approximate scale herein specified, made without mask on single-weight, semi-matte paper of the type specified in paragraph 9(a) hereof, from negatives taken with the type of camera and lens to be used; one photograph to be made from a negative taken with lens at full aperture; and the second photograph from a negative taken with lens at the maximum stop opening which the bidder will use, together with a sample double-weight, semi-matte unmasked, two and one-half (2-1/2) diameter enlargement from the second negative. These samples shall show terrain having an average amount of clear-cut detail and shall represent the quality of work, including over-all definition, definition in the corners and photographic quality, the bidder proposes to furnish and will be used as criteria in judging the quality of the photographs the contractor delivers under the contract. Samples showing only types of terrain in which it is difficult to determine whether the photographic quality and definition meet the requirements herein specified will not be accepted. The right is reserved to reject the bid of any bidder who fails to submit samples of the quality required by these specifications and the attached schedule.

12. Indexing.

(a) Each negative shall be marked clearly with the designating symbol of the county unit, as listed in the schedule of the advertisement, followed by the serial number of the roll and the serial number of the exposure on the roll (thus:- ABC-3-340) and also with a numerical abbreviation of the month, day and year of exposure (thus:-12-8-36). The rolls of film used on each project shall be numbered in an unbroken series, beginning with number one. The exposures on each project shall be numbered in an unbroken series, beginning with number one. The designating symbol and serial number shall be placed in the northeast corner of each

negative for north and south flights and in the northwest corner of each negative for east and west flights. The abbreviation of the date shall be placed in the adjacent corner of each negative in a counter clockwise direction. In addition, on the first and last negative of each flight strip and on the first and last negative of each roll of film the abbreviation of the Agricultural Adjustment Administration (AAA) and the approximate scale of the negatives shall be placed immediately preceding the designating symbol and the serial numbers (thus:-AAA-1:20,000-ABC-116-110) and the numerical abbreviation of the approximate time of day of the exposure shall be placed immediately following the date (thus:-12-8-36-12:30). The first and last negatives of each flight strip are to be considered as those taken at the actual beginning and termination of the flight strip, and not as the negatives that first cover the boundaries of the flight area. The characters used in marking negatives shall be three-sixteenth inches high and may be perforated, mechanically stamped with opaque ink or neatly drafted with celluloid ink, in such manner as to print clearly in positive form on the photographs in the positions herein specified.

(b) The metal container for each roll of film shall become the property of the Government and shall be neatly labeled with the words "United States Department of Agriculture", "Agricultural Adjustment Administration", the names of the State and County, the designating symbol, the number of the contract, the name and address of the contractor, the date or dates and hours of exposure, the serial number of the roll, the serial numbers of the first and last exposures, the approximate scale of the negatives and the model numbers and serial numbers of the camera-magazine combination used in making the exposures.

(c) There shall be delivered two copies of a rough index map for each county unit, or for each delivery of contact prints, if delivery is made of prints for less than a county unit, in order that proper identification may be made of the photographs. Such index maps shall show the approximate location, order and numbers of flights, the serial numbers of the first and last exposures of each flight, the boundaries of each county unit and the boundaries of the project and shall be prepared by tracing directly from the maps furnished by the Agricultural Adjustment Administration for use as flight maps. These index maps shall have a neatly executed title showing the name or number of the project and the State in which it is located, the name and designating symbol of the county unit, the number of the contract, the name of the contractor, the approximate scale of the map, and the date of completion. In case any portion or portions of the project are required to be reflown, two additional copies of the index map shall be delivered with the reflights indicated thereon.

SPECIAL CONDITIONS

13. Conditions of Bidding.

(a) Each bidder shall accompany his bid by a certificate stating the number of equipped photographic airplanes he has available for use in the execution of the proposed work that will perform satisfactorily at the necessary altitude to yield the negative scale herein specified and that are equipped with the necessary instruments and photographic apparatus to carry out, in accordance with these specifications, the photography covered by the invitation and schedule of the advertisement; that if awarded one or more of the items listed in the schedule of the advertisement, the minimum number of the said airplanes to be used in the execution of the work for each such item and that he has available and will use for each of said airplanes, the services of a qualified pilot with at least 50 hours of aerial photographic map flying experience, and a competent aerial photographer with at least 50 flying hours of aerial photographic mapping experience.

(b) Each bidder shall have the privilege of combining any two or more of the items listed in the schedule of the advertisement and submitting a single bid covering such combined items. In the event that any such bid is submitted to cover two or more items, the bidder shall be required to demonstrate to the satisfaction of the Department of Agriculture that he has the necessary equipment and personnel sufficient to complete, for each day that weather is suitable for photographing, the photography of an area of not less than 300 square miles for each item included in such bid.

(c) Each bidder shall submit with his bid the samples, certificate, and bid guarantee herein required.

(d) Each bid shall be accompanied by a showing of the facts as to the business and technical organization of the bidder available for the contemplated work, including financial resources and experience on similar projects. The right is reserved to reject any bid where investigation of the business and technical organization of the bidder available for the contemplated work, including financial resources and experience on similar projects, does not satisfy the Department of Agriculture that such bidder is qualified to perform the work.

(e) Bidders are expected to examine the specifications and maps, to visit the locality of the work if necessary, and to make their own estimates of the facilities needed and the difficulties attending the execution of the proposed contract, including local conditions, uncertainty of weather, availability of landing fields, and all other contingencies. Any requests for clarification or interpretation of any portion of the specifications or advertisement should be submitted in writing or by telegraph to reach the officer issuing the invitation at least one week prior to the time fixed for the opening of the bids in order that he may notify all prospective bidders of such interpretation or clarification without the necessity of postponing said time of opening.

(f) Each bidder shall state where he proposes to base his flying operations, and where he proposes to perform the work other than the flying.

(g) Each proposal (on U. S. Standard Form No. 33, Revised) will be received with the understanding that these specifications and special conditions form a part hereof, and that when accepted in writing within the time specified such accepted proposal shall constitute the contract between the bidder and the Government.

14. Bid Guarantee.

Each bid shall be accompanied by a bid guarantee payable to the United States Department of Agriculture, which guarantee may be in the form of Government Bonds, Money Order, Certified Check or Cashier's Check, Bid Bond or Surety guaranteeing that the bidder will not withdraw his bid within the period specified after the opening of the bids and that he will, if his bid is accepted, furnish a performance bond as herein specified. Any bidder having equipment and personnel available for handling but one item of the invitation and schedule of the advertisement must accompany his bid with a bid guarantee of not less than ten (10) percent of the largest amount bid on a single item. Any bidder having equipment and personnel available for handling two or more items of the invitation and schedule of the advertisement must accompany his bid with a bid guarantee of not less than ten (10) percent of the total of the largest amounts bid on the number of items for which said equipment and personnel are available. Bid guarantees of unsuccessful bidders will be returned when award is made.

15. Performance Bond.

The successful bidder will be required to furnish a performance bond acceptable to the United States Department of Agriculture, within five (5) days after receiving notice of award from the Government, said performance bond to be for fifty (50) percent of the amount of the contract.

16. Award and Notice to Proceed.

The notice to proceed will be given, by registered mail or telegram promptly after approval by the Secretary of Agriculture of the performance bond.

17. Commencement and Prosecution of Work.

The contractor shall undertake the photography of the areas to be photographed within seven (7) calendar days after the receipt of notice to proceed, shall prosecute the work as expeditiously as weather conditions will permit, and shall keep the flying equipment and personnel continuously on the project until the flying is completed. In the event the item includes more than one county unit, photography on the several county units shall be executed in such order as may be directed by the Agricultural Adjustment Administration.

18. Delivery and Time Allowance.

(a) All negatives, contact prints and index maps required by the schedule of the advertisement for each county unit, shall be shipped to the East Central Division, Agricultural Adjustment Administration, within fifteen (15) calendar days after the date flying is completed on said county unit, said completion to include reflights made at the discretion of the contractor. In case the Agricultural Adjustment Administration finds it necessary to call for reflights in the completed county unit, such reflights shall be made and negatives, contact prints and index maps shipped to the East Central Division within ten (10) calendar days after receipt of such notice by the contractor, except, in the case of unfavorable flying weather, or other conditions over which the contractor has no control, which would not, in the opinion of the Government's representative permit conformance to those specifications, the contractor shall have an extension of time equal to the number of days of unavoidable delay. Said deliveries shall in no case be required to exceed an area of four thousand (4,000) square miles, for each project, in any thirty (30) day period.

(b) Liquidated damages will run against delivery time only. The contractor shall not be liable for liquidated damages between the dates of delivery and dates of acceptance or rejection of the materials on the original flight or the reflight under the foregoing specifications.

19. Specifications and Maps.

The contractor shall keep at the base of his operations a copy of the maps and specifications, including the invitation and schedule of the advertisement, and shall at all times give any designated representative of the Agricultural Adjustment Administration access thereto. Anything mentioned in the specifications and not shown on the maps or shown on the maps and not mentioned in the specifications shall be of like effect as if shown or mentioned in both. In case of apparent conflict between maps and specifications, the specifications shall govern. In any case of discrepancy in the figures, maps or specifications, the matter shall be immediately submitted to the Agricultural Adjustment Administration, without whose decision said discrepancy shall not be adjusted by the contractor, save only at his own risk and expense.

20. Changes.

The contracting officer may at any time, by a written order, and without notice to the sureties, if any, make changes in the maps and/or specifications of the contract and within the general scope thereof. If such changes cause an increase or decrease in the amount due under the contract, or in the time required for its performance, an equitable adjustment shall be made and the contract shall be modified in writing accordingly. No change involving an estimated increase or decrease of more than 25 percent of the contract price shall be ordered unless approved in writing by the Secretary of Agriculture or his duly authorized representative. Any claim for adjustment under this paragraph must be asserted within ten (10) days from the date the change is ordered: Provided, however, That the contracting officer, if he determines that the facts justify such action, may receive and consider, and with the approval of the Secretary of Agriculture or his duly authorized representative, adjust any such claim asserted at any time prior to

the date of final settlement of the contract. If the parties fail to agree upon the adjustment to be made, the dispute shall be determined as provided in paragraph 29 hereof. Nothing provided in this paragraph shall excuse the contractor from proceeding with the prosecution of the work so changed.

21. Delivery, Inspection and Acceptance.

Contact prints shall be delivered for every negative exposed on each project, except those exposures discarded by the contractor before delivery as not fulfilling the specifications. The contact prints will be inspected by the Agricultural Adjustment Administration as soon as possible after receipt of the prints, after which the contractor will be notified in writing whether they are satisfactory and what areas, if any, shall be re-photographed because of non-conformity with the contract requirements. In the event any area is to be refloated, the contractor shall have his airplane and photographic crew at the base from which such flying is to be done within three (3) calendar days after receipt of said notification, except that if any of the project still remains unfloated the contractor shall continue to maintain said airplane and crew at the base for making the remaining flights until such time as all flying is completed. If, in the opinion of the Agricultural Adjustment Administration, any unsatisfactory prints can be replaced by the contractor without requiring a reflight, the necessary reprints shall be shipped to the Agricultural Adjustment Administration immediately upon request.

22. Delays--Liquidated Damages.

If the contractor refuses or fails to make delivery of the materials or supplies within the times specified, or any extension thereof, the actual damage to the Government for the delay will be impossible to determine, and in lieu thereof the contractor shall pay to the Government, as fixed, agreed, and liquidated damages for each calendar day of delay in making delivery, the amount as set forth in the specifications or accompanying papers, and the contractor and his sureties shall be liable for the amount thereof: Provided, however, That the Government reserves the right to terminate the right of the contractor to proceed with deliveries or such part or parts thereof as to which there has been delay, and to purchase similar material or supplies in the open market or secure the manufacture and delivery thereof by contract or otherwise, charging against the contractor and his sureties any excess cost occasioned the Government thereby, together with liquidated damages accruing until such time as the Government may reasonably procure similar material or supplies elsewhere: Provided further, That the contractor shall not be charged with liquidated damages or any excess cost when the delay in delivery is due to unforeseeable causes beyond the control and without the fault or negligence of the contractor, including, but not restricted to, acts of God or the public enemy, acts of the Government, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, and delays of a subcontractor due to such causes unless the contracting officer shall determine that the materials or supplies to be furnished under the subcontract are procurable in the open market, if the contractor shall notify the contracting officer in writing of the cause of any such delay, within 10 days from the beginning thereof, or within such further period as the contracting officer shall, with the approval of the Secretary of Agriculture or his duly authorized representative, prior to the date of final settlement of the contract, grant for the giving of such notice. The contracting officer shall

then ascertain the facts and extent of the delay and extend the time for making delivery when in his judgment the findings of fact justify such an extension, and his findings of fact thereon shall be final and conclusive on the parties hereto, subject only to appeal, within 30 days, by the contractor to the Secretary of Agriculture or his duly authorized representative; whose decision on such appeal as to the facts of delay and the extension of time for making delivery shall be final and conclusive on the parties hereto.

23. Liquidated Damages.

The fixed, agreed, and liquidated, damages to be paid the Government by the contractor in accordance with paragraph 22 hereof, shall be ten dollars (\$10.00) for each calendar day of delay in delivery after expiration of the time allowances specified in paragraph 18 hereof.

24. Risk-Damages.

The contractor shall assume all risks in connection with the performance of the contract; and shall be liable for, and save the Government harmless on account of, any damages to persons or property in connection with the prosecution of the work.

25. Reports.

The contractor shall submit to the Director of the East Central Division, Agricultural Adjustment Administration, regular weekly reports showing progress of the work. Forms for said reports will be supplied the contractor with the flight maps.

26. Ownership of Negatives.

All negatives shall become the property of the Government and shall be delivered to the Agricultural Adjustment Administration in accordance with the provisions of paragraph 18 hereof.

27. Subcontracts.

The contractor shall not, without prior written approval of the contracting officer, enter into any subcontract covering any part of the work contemplated by his contract.

28. Patents.

The contractor shall hold and save the Government, its officers, agents, servants, and employees, harmless from liability of any nature or kind, including costs and expenses, for or on account of any patented or unpatented invention, article, or appliance manufactured or used in the performance of this contract, including their use by the Government.

29. Permits and Care of Work.

The contractor shall, without additional expense to the Government, obtain all required licenses and permits, and shall be responsible for the proper care and protection of all materials until delivery thereof in accordance with the provisions of these specifications.

30. Disputes.

Except as otherwise specifically provided in the contract all disputes concerning questions of fact rising under the contract shall be decided by the contracting officer subject to written appeal by the contractor within thirty (30) days to the Secretary of Agriculture or his duly authorized representative, whose decision shall be final and conclusive upon the parties thereto. In the meantime the contractor shall diligently proceed with the work as directed.

31. Payments to Contractors.

Payments will be made upon the complete delivery and final acceptance of all materials for each county unit. These payments will be the full amount due to the contractor for the particular area involved, as shown on the bid sheets.

32. Bids and Awards on More than One Item.

Bidders are invited but not required to bid on each item listed in the schedule of the advertisement. In the event that one bidder is the low bidder on a number of items exceeding the number of equipped airplanes and photographic crews he has available for use in the execution of the proposed work, he will be awarded such of the items, not less than one for each such airplane and crew, as can satisfactorily be handled in conformity with the requirements of paragraph 13 hereof, and the remaining item or items will be awarded to the next low bidder or bidders in the same manner. The selection of these awards will be made to the best interest of the Government at the discretion of the Department of Agriculture.

NOTE: All envelopes containing bids submitted in response to this advertisement shall be plainly marked on the outside as follows:

"Bids on aerial photography for the East Central and Northeast Divisions, Agricultural Adjustment Administration.
To be opened , at 2:00 P. M.,
E. S. T."